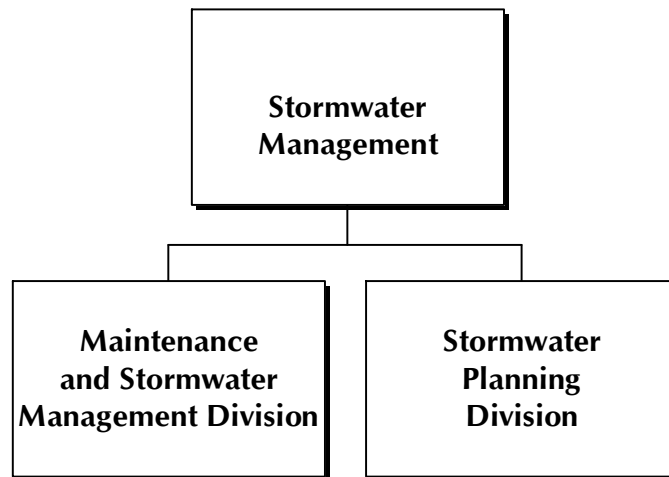


Stormwater Management



Mission

To develop and maintain a comprehensive watershed and infrastructure management program to protect property, health and safety; to enhance the quality of life; to preserve and improve the environment for the benefit of the public. To plan, design, construct, operate, maintain and inspect the infrastructure, and perform environmental assessments through coordinated stormwater and maintenance programs in compliance with all government regulations utilizing innovative techniques, customer feedback and program review; and to be responsive and sensitive to the needs of the residents, customers and public partners.

Focus

The Stormwater Management (SWM) business area consists of the Maintenance and Stormwater Management Division and the Stormwater Planning Division. The two divisions develop, promote and implement strategies that protect the County's stormwater infrastructure and preserve and improve the natural ecosystem. In addition, the agency has an intricate supporting role in emergency response to flooding and other designated emergencies, as well as supporting functions in ongoing transportation and commercial revitalization initiatives. Planning, designing and maintenance efforts are provided through a combination of in-house County staff and contracted services.

Maintenance and Stormwater Management Division

The Maintenance and Stormwater Management Division (MSMD) provides maintenance and rehabilitation services on existing stormwater infrastructure such as, stormwater pipes, catch basins, drainage channels, stormwater management facilities and dams. Stormwater maintenance services are provided in an effort to manage the conveyance of stormwater runoff, mitigate flooding and improve water quality entering water bodies as required by local ordinances and codes, as well as state and federal laws. MSMD provides inspection and oversight of privately maintained stormwater management facilities as required by the state and federal water quality permits.

MSMD maintains transportation facilities such as, commuter rail stations, park-and-ride lots, bus transit stations, bus shelters and roadway segments that have not been accepted into the Virginia Department of Transportation. County trails and sidewalks are repaired, and when necessary, upgraded to meet American with Disabilities Act code requirements. Other transportation operations maintenance services provided by MSMD include maintaining the Fairfax County public street name signs. Landscaping services are provided along the transportation routes in the designated commercial revitalization districts.

THINKING STRATEGICALLY

Strategic challenges for the Department include:

- o Prioritizing the numerous maintenance requirements to identify and address the most critical needs;
- o Improving communication with all customers in the County; and
- o Developing and maintaining a comprehensive watershed management program to protect property and ensure safety.

Stormwater Management

MSMD provides support during emergency response operations. The Division is responsible for snow removal from all County owned and maintained facilities including fire stations, police stations, mass transit facilities, government centers, libraries, health centers, and recreation centers. The Division also provides equipment, labor and technical support to fire and rescue, police, health department and other agencies to mitigate emergency conditions (e.g. hazardous material spills, demolition of unsafe structures, removal of hazardous trees etc).

Stormwater Planning Division

The Stormwater Planning Division (SPD) provides stormwater planning, monitoring, capital project design and floodplain management. This division maintains the County's federally mandated National Pollutant Discharge Elimination System (NPDES) stormwater permit. This division also coordinates state mandated dam safety operation and maintenance certificates, emergency action plans related to flooding, watershed management efforts, public education and awareness initiatives, stream monitoring and assessments and implementation of the County's master drainage plan.

SPD provides the design and general oversight of capital projects to correct drainage deficiencies, mitigate existing flooding conditions, rehabilitate failing storm drainage systems, retrofit older stormwater management facilities and stabilize eroding stream banks through innovative bioremediation methods.

SPD is responsible for the development and oversight of Fairfax County's Comprehensive Stormwater Management Program. The Division remains current with a multitude of state and federal regulatory stormwater management requirements such as the County's Virginia Pollutant Discharge Elimination System (VPDES) permit from the Department of Environmental Quality to discharge stormwater through the municipal separate storm sewer system (MS-4) into state waters. As part of the VPDES permit, the Division is in the phased process of watershed planning efforts in the 30 watersheds located in Fairfax County. This effort is required to control pollutants in stormwater discharges.

A component of the VPDES permit is to inspect and ensure effective maintenance of public and private stormwater facilities. As part of the VPDES permit, the division also conducts bioassessment monitoring to identify and correct non-stormwater discharges (illegal discharge and improper dumping) to the state waters. The division performs physical stream assessments of over 800 miles of streams in support of watershed planning efforts, and is in the process of completing an update of the County's Geographic Information System (GIS) hydrological layer to improve accuracy, connectivity and flow direction of the stream network.




The Division participates in several regional partnering efforts such as the Chesapeake Bay Preservation Area Designation and Management, and the 2000 Chesapeake Bay Agreement in support of removing the bay from U.S. EPA's impaired waters list by the year 2010. These efforts are employed to manage and reduce the nutrient and sediment loads to the Chesapeake Bay. The division oversees regulatory Clean Water Act requirements as they pertain to Total Maximum Daily Loads (TMDLs). This is an effort to define, monitor and control the number of pollutants in streams that violate state water standards.

SPD oversees and implements the County's Dam Safety program. State and federal regulations are designed to provide inspections and engineering certification of dams to insure public safety. The division is also responsible for coordination and providing assistance for floodplain management regulations pertaining to floodplain residential building requirements and national flood insurance standards.


To complete the regulatory and maintenance requirements of the agency, both divisions utilize the use of in-house County work forces and contracted services. In an effort to remain a leader in the stormwater management industry, the agency focuses on the increasing stormwater management requirements of an aging stormwater system inventory and the increased environmental performance requirements. As the County moves toward a fully urban development, the aged stormwater systems in the County are approaching expected life spans. The challenge of the agency is to maintain existing systems, while enhancing and retrofitting the degraded systems to meet stormwater management regulations. The agency continually provides public outreach for opportunities to inform the public of water quality matters and environmental effects of stormwater runoff.

Stormwater Management

New Initiatives and Recent Accomplishments in Support of the Fairfax County Vision

 Maintaining Safe and Caring Communities	Recent Success	FY 2005 Initiative	Cost Center
Staff successfully trained and obtained state certification as pest control applicators to address mosquito- borne West Nile Virus. In FY 2005, a program will be implemented to treat selected agency maintained stormwater facilities.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Maintenance and Stormwater Management
Managed and maintained a successful dam safety and emergency response program by providing dam and engineering inspections to insure public safety as required by state and federal regulation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Agencywide
 Connecting People and Places	Recent Success	FY 2005 Initiative	Cost Center
Provided maintenance services for the County transportation facilities, bus shelters and commercial revitalization district through the use of an innovative performance-based contract. This multi-year contract incorporates proactive facility inspections that quickly identify and address public safety deficiencies.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Maintenance and Stormwater Management
 Practicing Environmental Stewardship	Recent Success	FY 2005 Initiative	Cost Center
Continue to develop of Watershed Management Plans and appropriate models for estimating pollutant loadings to the County's receiving waters. Continue the retrofit evaluation and implementation program of stormwater management facilities as targets of opportunity arise.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Stormwater Planning
Participated with the Reston Association, Virginia Department of Forestry and the Northern Virginia Soil and Water Conservancy in the successful restoration of a severely eroded section of the Snakeden Branch Stream. The use of innovative bioremediation stream bank stabilization methods that use natural resources to stabilize eroded banks and realign channel flows were installed in this multi-organizational project. In FY 2005 additional joint participation projects of this nature will be implemented.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Maintenance and Stormwater Management

Stormwater Management

 Practicing Environmental Stewardship	Recent Success	FY 2005 Initiative	Cost Center
Continued to develop a digitized Geographic Information System (GIS) storm sewer mapping layer. The effort to digitize the storm sewers in Fairfax County provides immediate access information for Fire and Rescue hazardous material critical responses, and provides accurate storm sewer inventory control for Government Accounting Standards Board (GASB) reporting and maintenance operations.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Agencywide
Developed and tested a new protocol for identifying perennial streams in Fairfax County. The protocol were later approved by the state and used to conduct countywide perennial stream identifications to update Resource Protection Area (RPA) maps in compliance with the revised State requirements and adopted amendment to the County's Chesapeake Bay Preservation Ordinance.	<input checked="" type="checkbox"/>		Stormwater Planning
Increased watershed and stream monitoring to implement new requirements of the renewed Municipal Separate Storm Sewer System (MS4) permit which regulates the discharge of stormwater into state waters, and assumed the bacteria (fecal coliform) monitoring program from the Health Department. Continue to assist the USGS with follow-up TMDL monitoring to identify sources of human contribution into Accotink Creek.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Stormwater Planning
Continue to evaluate the Regional Pond program and pursue the implementation of recommendations to address improvements to the overall County's stormwater management program.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Stormwater Planning

Stormwater Management

Budget and Staff Resources

Agency Summary					
Category	FY 2003 Actual	FY 2004 Adopted Budget Plan	FY 2004 Revised Budget Plan	FY 2005 Advertised Budget Plan	FY 2005 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	123/ 123	120/ 120	127/ 127	123/ 123	127/ 127
Expenditures:					
Personnel Services	\$5,652,722	\$6,139,968	\$6,139,968	\$6,380,331	\$6,380,331
Operating Expenses	2,741,180	2,426,915	3,008,980	2,434,024	2,434,024
Capital Equipment	117,591	51,000	307,561	278,000	278,000
Subtotal	\$8,511,493	\$8,617,883	\$9,456,509	\$9,092,355	\$9,092,355
Less:					
Recovered Costs	(\$668,672)	(\$744,430)	(\$744,430)	(\$770,827)	(\$770,827)
Total Expenditures	\$7,842,821	\$7,873,453	\$8,712,079	\$8,321,528	\$8,321,528
Income:					
Street Sign Fabrication Fees	\$3,600	\$4,648	\$4,648	\$4,648	\$4,648
Miscellaneous Revenue	20,997	16,000	16,000	16,000	16,000
Total Income	\$24,597	\$20,648	\$20,648	\$20,648	\$20,648
Net Cost to the County	\$7,818,224	\$7,852,805	\$8,691,431	\$8,300,880	\$8,300,880

FY 2005 Funding Adjustments

The following funding adjustments from the FY 2004 Revised Budget Plan are necessary to support the FY 2005 program:

- ◆ **Employee Compensation** **\$213,966**
 A net increase of \$213,966 due to an increase of \$240,363 associated with salary adjustments necessary to support the County's compensation program partially offset by an increase of \$26,397 in Recovered Costs for services to other agencies and projects.
- ◆ **Operating Expenses** **\$7,109**
 An increase of \$73,140 in Operating Expenses required for the inspection and maintenance of new bus shelters and parking facilities based on estimates for developer donated shelters and those scheduled for completion by the County in FY 2004 as well as new water retention ponds which are primarily developer donated. It should be noted that this funding will help address concerns expressed by the Board of Supervisors regarding the condition of bus shelters throughout the County. This increase is partially offset by a decrease of \$66,031 primarily due to reduced requirements for sign materials and decreased Department of Vehicle Services Charges.
- ◆ **Carryover Adjustments** **(\$396,317)**
 A decrease of \$396,317 in Operating Expenses due to one-time expenses as part of the FY 2003 Carryover Review.
- ◆ **Replacement of Equipment** **\$278,000**
 Funding of \$278,000 is included for the replacement of necessary Capital Equipment. The equipment includes replacement of the County's only mobile 22 ton crane, \$240,000, which is used by the agency for numerous repair and maintenance projects and by other agencies such as Facilities Management Division to replace rooftop equipment, as well as by the Fire and Rescue Department for demolition and hazmat incidents. Also recommended for replacement is a slope mower, \$38,000, that is required for various maintenance efforts. The replacement of this equipment is endorsed by the Department of Vehicle Services based on the age and condition of the equipment as well as the expensive repairs that are needed.

Stormwater Management

Board of Supervisors' Adjustments

The following funding adjustments reflect all changes to the FY 2005 Advertised Budget Plan, as approved by the Board of Supervisors on April 26, 2004:

- ◆ The Board of Supervisors made no adjustments to this agency.

Changes to FY 2004 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2004 Revised Budget Plan since passage of the FY 2004 Adopted Budget Plan. Included are all adjustments made as part of the FY 2003 Carryover Review and all other approved changes through December 31, 2003:

- ◆ **Carryover Adjustments** **\$636,626**
Encumbered carryover of \$636,626 including \$396,317 in Operating Expenses and \$240,309 in Capital Equipment.
- ◆ **Position Adjustments** **\$0**
In order to address significantly increased requirements for maintenance inspections, 2/2.0 SYE Engineering Technician III positions were transferred from Wastewater Collection to Stormwater Management.

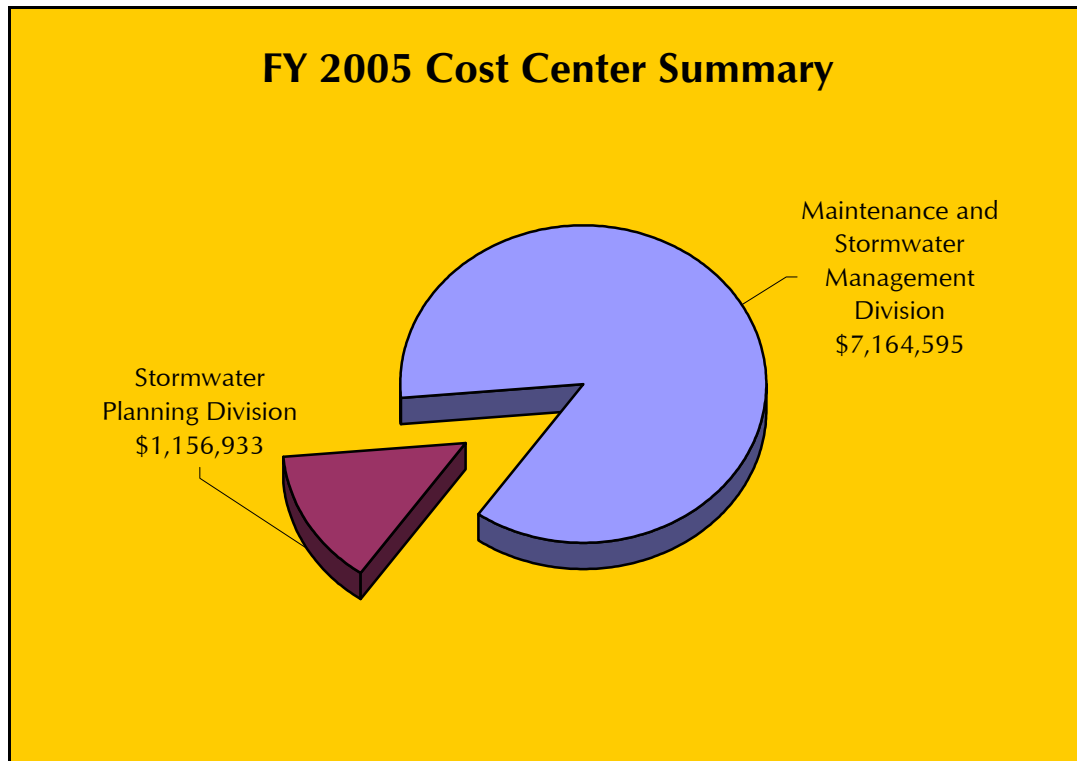
The following funding adjustments reflect all approved changes to the FY 2004 Revised Budget Plan from January 1, 2004 through April 19, 2004. Included are all adjustments made as part of the FY 2004 Third Quarter Review:

- ◆ **Hurricane Isabel** **\$202,000**
Funding of \$202,000 is required for equipment, materials and contracted services as emergency staff were required to provide on-site monitoring of state and federal regulated, County-maintained flood control impounding facilities.
- ◆ **Ecologist Positions** **\$0**
Four positions are transferred from the Wastewater Treatment Division and three positions are abolished in Stormwater Management to establish 1/1.0 SYE Ecologist III position and 6/6.0 SYE Ecologist II positions. These positions will support perennial stream determinations, stream mapping and field checks of the Chesapeake Bay tributary stream system.

Stormwater Management

Cost Centers

Stormwater Management consists of two cost centers, Maintenance and Stormwater Management and Stormwater Planning.



Maintenance and Stormwater Management Division

Funding Summary					
Category	FY 2003 Actual	FY 2004 Adopted Budget Plan	FY 2004 Revised Budget Plan	FY 2005 Advertised Budget Plan	FY 2005 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	100/ 100	98/ 98	100/ 100	100/ 100	100/ 100
Total Expenditure	\$6,912,548	\$6,756,805	\$7,594,760	\$7,164,595	\$7,164,595

Stormwater Management

Position Summary		
<u>MAINTENANCE AND STORMWATER MANAGEMENT DIVISION</u>	<u>MAINTENANCE AND SERVICES</u>	<u>Engineering/Technical Support</u>
<u>Administration</u>	<u>Field Operations</u>	
1 Director	1 Facilities Support Supervisor	2 Engineers III
1 Engineer IV	4 Senior Maintenance Supervisors	2 Engineers II
1 Safety Analyst	2 Maintenance Supervisors	2 Engineering Technicians III
1 Management Analyst II	9 Labor Crew Chiefs	1 Engineering Technician II
1 Network/Telecom Analyst I	6 Laborers III	1 GIS Analyst I
1 Administrative Assistant IV	7 Utility Workers	1 GIS Technician
4 Administrative Assistants II	8 Heavy Equipment Operators	
	8 Motor Equipment Operators	<u>Equipment/Specialty Trades</u>
	11 Truck Drivers	1 Vehicle Maintenance Coordinator
	4 Masons I	1 Heavy Equipment Operator
		1 Motor Equipment Operator
<u>Contracting Services</u>	<u>Maintenance Inspections</u>	1 Carpenter I
1 Engineering Technician III	1 Engineer II	1 Equipment Repairer
1 Engineering Technician II	3 Engineering Technicians III	1 Welder II
	1 Senior Maintenance Supervisor	
	3 Engineering Technicians I	<u>SIGN SERVICES AND MATERIAL SUPPORT</u>
		1 Sign Shop Supervisor
		1 Warehouse Supervisor
		1 Warehouse Specialist
		1 Engineering Aide
		1 Motor Equipment Operator
<u>TOTAL POSITIONS</u>		
100 Positions / 100.0 Staff Years		

Key Performance Measures

Goal

To maintain the County's storm drainage systems, stormwater management facilities, walkways/trails, commuter rail and park-and-ride facilities, and public street name signs, in addition to provide snow removal for essential County facilities, responding to health and safety directives, and providing support for other public safety emergencies as requested.

Objectives

- ◆ To ensure zero violations in order to maintain compliance with the terms of the federally mandated Municipal Separate Storm Sewer System (MS-4) Permit, as part of the comprehensive Stormwater Management Program
- ◆ To ensure that 100 percent of Emergency Action plans are updated and operational to minimize impact to Fairfax County citizens, as well as protect property from weather events and other emergency situations.
- ◆ To ensure that 100 percent of the Commuter Rail, Park-and-Ride and Bus Transit facilities maintained by the County are functional 365 days per year in support of Fairfax County alternative transportation initiatives in order to reduce air pollution.

Stormwater Management

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate/Actual	FY 2004	FY 2005
Output:					
Private stormwater management facilities inspected annually	NA	NA	NA	NA	436
Public stormwater management facilities inspected and maintained annually	NA	NA	NA	NA	1,167
Emergency Action plans updated	NA	NA	NA	NA	11
Average weekly private vehicle trips	NA	NA	NA	NA	22,925
Average weekly commuter bus trips	NA	NA	NA	NA	7,882
Average weekly train trips	NA	NA	NA	NA	280
Efficiency:					
Cost of inspection per private stormwater management facility	NA	NA	NA	NA	\$263
Cost of inspection and maintenance per public stormwater management facility	NA	NA	NA	NA	\$748
Cost of Emergency Response program per 100,000 population	NA	NA	NA	NA	\$126,910
Cost per transit trip	NA	NA	NA	NA	\$0.39
Service Quality:					
Percent of private facilities inspected within the fiscal year	NA	NA	NA	NA	20%
Percent of public facilities inspected and maintained within the fiscal year	NA	NA	NA	NA	100%
Dollar loss per 100,000 population for claims paid as a result of an inappropriate response to an emergency event	NA	NA	NA	NA	\$969
Annual commuter facilities complaints received	NA	NA	NA	NA	23
Outcome:					
MS-4 permit violations received (1)	NA	NA	NA	NA	0
Percent of Emergency Action Plans current (2)	NA	NA	NA	NA	100%
Percent of commuter facilities available 365 days per year (3)	NA	NA	NA	NA	100%

(1) Pertains to the requirements of the Stormwater Management facilities inspection and maintenance program for the MS-4 permit. Fairfax County remains non-compliant with other aspects of the MS-4 permit requirement based on funding considerations in permit areas such as: retrofitting facilities for additional water quality, industrial runoff monitoring, infrastructure management and public education.

(2) Represents the preparedness for Emergency Response by the business area staff in order to manage response efforts and minimize personal and property losses during adverse circumstances.

(3) The future method to calculate the Commuter Rail, Park-and-Ride and Bus Transit facility efficiency will be to provide a cost per customer served by calculating the number of customers compared with the annual maintenance cost. Currently data only exist for transit vehicle trips that enter the facility.

Stormwater Management

Stormwater Planning Division

Funding Summary					
Category	FY 2003 Actual	FY 2004 Adopted Budget Plan	FY 2004 Revised Budget Plan	FY 2005 Advertised Budget Plan	FY 2005 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	23/ 23	22/ 22	27/ 27	23/ 23	27/ 27
Total Expenditure	\$930,273	\$1,116,648	\$1,117,319	\$1,156,933	\$1,156,933

Position Summary					
1 Director	1 Landscape Architect III	1 Administrative Assistant III			
2 Engineers IV	1 Engineering Technician I				
4 Engineers III	1 Ecologist III				
10 Engineers II	6 Ecologists II				
TOTAL POSITIONS					
27 Positions / 27.0 Staff Years					

Key Performance Measures

Goal

To develop and implement the planning and design of stormwater systems to promote, preserve and improve the natural ecosystems in order to enhance the quality of life within the community.

Objectives

- ◆ To initiate and complete development of 2 watershed management plans in FY 2005, toward a goal of 5 per year in order to meet Fairfax County's commitment of the Chesapeake Bay 2000 Agreement, and contribute to the removal of the Bay from the "Impaired Water" list by the year 2010.

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2001 Actual	FY 2002 Actual	FY 2003 Estimate/Actual	FY 2004	FY 2005
Output:					
Watershed Plans completed (2)	NA	NA	NA	NA	2
Efficiency:					
Average cost per square mile to develop watershed plans (1)	NA	NA	NA	NA	NA
Service Quality:					
Cumulative percent of watershed plans completed toward the completion of the 30 required watershed plans	NA	NA	NA	NA	6.7%
Outcome:					
Annual percent of watershed plans completed	NA	NA	NA	NA	100.0%

(1) The FY 2005-Estimated Efficiency indicator Watershed Plan Completions: The average cost per square mile to develop watershed plans is not currently available. As contracts are awarded to complete these plans, the cost per square mile will be provided.

(2) The FY 2005-Estimated Output indicator Watershed Plan Completions: Due to program initiation timeframe, in FY 2005 the projected annual plan completion rate is 2. Since the program start-up phase has been completed, completion rates will increase in future years to meet the objective completion date of 2010.

Stormwater Management

Performance Measurement Results

The Stormwater Management Business Area completed its strategic plan to identify and address the long term needs and requirements of the business. In parallel with that effort, the FY 2005 performance measures were enhanced to reflect the core functions of the business area and aligned with the strategic plan as they relate to Fairfax County's Vision elements. For FY 2005, new performance measures have been developed to measure and track critical program requirements of the business area, however no data is available at this time. The indicators are designed to ensure that mandated requirements and critical program elements are monitored and managed. The measures will help to focus on emergency preparedness and assure public safety management.

The FY 2005 performance measures will provide performance data in the completion of watershed planning efforts to fulfill Fairfax County's commitment to the Chesapeake Bay Agreement of 2000, in an effort to remove the Bay from the "Impaired Waters" list by 2010. As noted on the performance measurement table, the first new measure involves watershed plan completions. The second measure will track compliance with the federally mandated Municipal Separate Storm Sewer System (MS-4) permit requirements by measuring effectiveness of the inspection program for private stormwater management facilities and the inspection and maintenance program for public stormwater management facilities. The third measure will demonstrate the status of emergency preparedness for response during critical flooding, snow and other emergency response circumstances, thereby minimizing the personal and property losses of Fairfax County residents during adverse conditions. The fourth measure will demonstrate the business area's efforts in maintaining the Commuter Rail and Park-and-Ride and Bus Transit facilities owned and operated by Fairfax County. This critical program focuses on the maintenance of these heavily used facilities, providing air quality benefits in support of local traffic mitigation efforts. The estimates that have been provided in the indicators of these 4 objectives are based on the most current data available. Data collection methods will be reviewed and adjusted as necessary for future years' reporting on the performance associated with these objectives.